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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,821	02/27/2002	Corinna E. Lathan	1134-202	2394

30011 7590 04/28/2003

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EXAMINER
MARC, MCDIEUNEL

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary	Application No.	Applicant(s)	
	10/085,821	LATHAN ET AL.	
	Examiner	Art Unit	
	McDieunel Marc	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *21 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 8, 10-20, 23-28, 30-35, 37-49* is/are rejected.

7)☒ Claim(s) *6,7,9,21,22,29 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 June 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This is in response to a letter for patent filed on February 27th, 2002, in which claims **1-49** are presented for examination. Claims **1-49** are pending in the letter.

2. The preliminary amendment filed on February 21, 2003 has been entered.

Priority

3. Receipt is acknowledged of papers submitted under ***35 U.S.C. 119(e)***.

Information Disclosure Statement

4. The information disclosure statements filed on 05/30/2002 and 12/30/2003 comply with the provisions of **MPEP § 609.** It has been placed in the application file, and the information referred to therein has been considered as to the merits. A signed copy of the form is attached.

Specification

5. The abstract of the disclosure is objected to because the phrase "adapted to". See page 48, lines 1-2. Also, the title of the invention should be deleted on top of the abstract.

Appropriate correction is required.

Applicant is reminded to update U.S. Patent Application 09/361,753, which becomes 6413190 as of 07/02/2002 in the next communication.

Claim Objections

6. Claims **1-15 and 43-49** are objected to because of the following informalities:

The phrase "**adapted to**" suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. See claim 1, lines 2, 6, claim 44, line 2 and claim 49, lines 6. Therefore, the clause "**adapted to**" should not be used as claim language. Appropriate correction is required.

Dependent claims not specifically objected are objected as being dependent upon an objected base claim.

Claim Rejections - 35 USC § 102

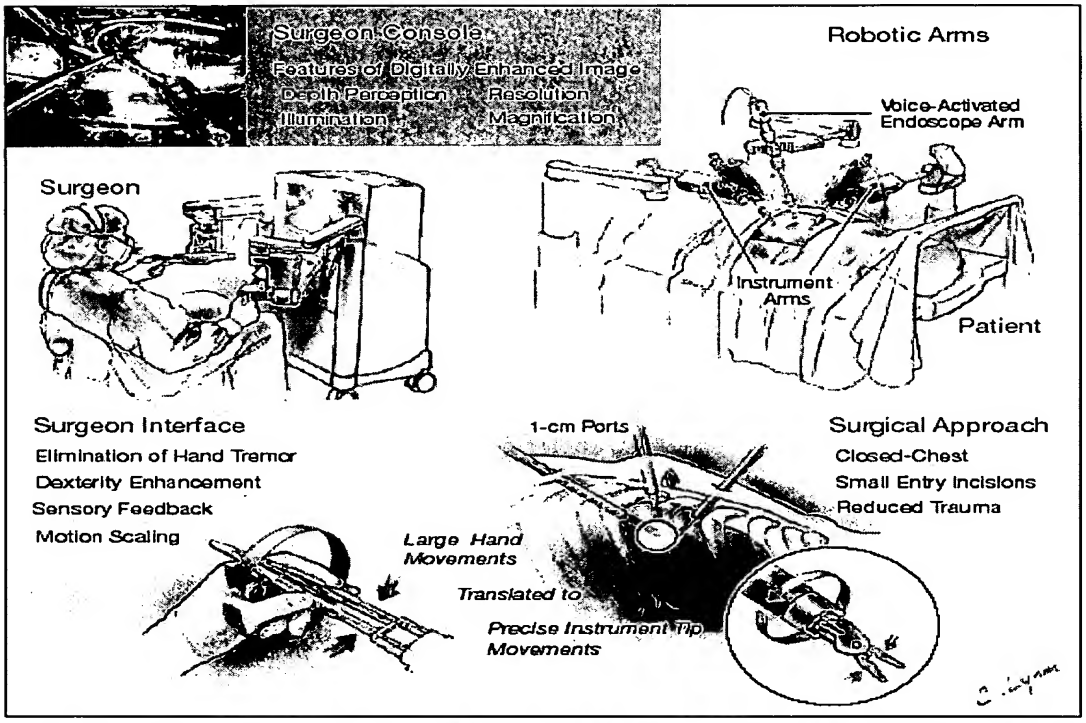
7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims **1-5, 8, 10-20, 23-28, 30-35, 37-49** are rejected under ***35 U.S.C. 102(a)*** as being anticipated by **Mack** (**"*Minimally Invasive and Robotics Surgery*", 2001**).

As per claims **1, 16, 32 and 43,** **Mack** teaches a robot comprising a controller to process a signal to an actuator (see figure on page 571, particularly the surgeon's console/ **ZEUS**[TM1]); a

Figure. Endoscopic Surgery With a Robotic System



The use of robotics or "computer assistance" enhances the performance of complex endoscopic procedures, such as coronary artery bypass graft surgery.

[1] The **ZEUS**[TM] Surgery Robotic System is similar to the **Da Vinci**[TM] system. At a console the surgeon controls the instrument handles while viewing the operative area on a monitor. Using a computer interface the surgical instruments attached to a three arms robot mimic the surgeon's movements on a real time on the patient as seen in figure. One of the armed is designed for the endoscope controlled by voice control. The technology available eliminates the slight hand tremors of the surgeon and also allow the surgeon to scale their natural movements to a microscopic scale. The ZEUS system has many advantages such as small incision about the diameter of pencil, reduced patient pain and trauma, and short hospital stays.

dynamic feedback control system between a user and said robot (see table on page 570, particularly *force feedback*), said control system having a sensor in communication with a said user to sensor input of said user and to communicate a signal of said sensor with said robot (see table on page 570, particularly *force feedback* and figure on page 571, the surgeon's handle);

Technology Development and Forecast: Robotics and Computer Assistance in Surgery		
Task	Function	Forecast
Surgical Assistant	Voice-Activated Endoscopic Holder/Positioner	Becoming Routine
Dexterity Enhancement Motion Scaling Tremor Filtration Force Feedback	Facilitate Precision Endoscopic Procedures	Of 1000 Procedures Now Performed, 50% Are Cardiac and 50% Are Laparoscopic
Operating Room Systems Networking	Surgeon Control of or Via Voice Activation, Touch Screen	Rapid Integration of Operating Room Systems in Near Future
Telepresence Surgery Remote Surgery	Surgeon at Remote Site From Patient Using Broadband Transmission or Internet	No Clear Path to Clinical Application
Telementoring	Proctoring From a Remote Site	Demonstrated to Have Potential for New Educational Paradigm
Information Enhancement 3-Dimensional Modeling and Reconstruction Image Referencing Guidance	Real-Time Data Acquisition and Nonvisual Imaging	3-Dimensional Reconstruction of Computed Tomography, Magnetic Resonance Imaging, and Ultrasonography With Surgical Overlays to Facilitate Percutaneous Therapy
Virtual Stillness (Motion Stabilization)	"Gate" Time Visualization and Surgical Instruments to Heart Motion to Create Illusion of Stillness	Facilitate Endoscopic "Beating Heart" Surgery
Virtual Simulators	Flight Simulators for Surgery	About to Become Realistic and Affordable
Information Enhancement Sensory Feedback	Action in Response to Nonvisual Feedback	Potential for Integrated "Smart" Local Delivery of Drug/Energy Based on Tissue-Level Feedback
Microelectronic Mechanical Systems	Miniature Autonomous Robots	Remote Diagnosis and Delivery Via Body Lumina

and said actuator receives said signal and actuates a part of said robot in response to said user input exceeding a defined threshold (see figure on page 571, the surgeon's handle at the console unit and the robotic arms); a computer readable medium signal bearing medium; means in the medium for sending data over a wireless connection; wherein said sensor is in wireless communication with said robot; reading sensor data in communication with a robotic apparatus (see table on page 570, particularly proctoring from a remote site); a power control module (see ZEUS on page 571); a transceiver (see figure on page 571, ZEUS and the robotic arms); a central processing unit (see figure on page 571, particularly ZEUS and table on page 570).

As per claims **2-5, 8, 10-15, 17-20, 23-28, 30-35, 37-42 and 44-49, Mack** teaches a robot comprising sensors, physical input form a user, sensor is secured to a user and a console, a computer store data receive from a sensor, operator interface includes a menu to select an interactive mode of operation between said robot and said user, ... (see pages 568-572), which meet all the limitations mentioned above.

Allowable Subject Matter

9. Claims **6, 7, 9, 21, 22, 29 and 36** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*** The prior arts cited in PTO-Form 892 with the exception of (Mack) disclose pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (703) 305-4478. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, Jr. can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

M. Marc
McDieunel Marc

April 21, 2003

MM/

DRAFT

1. A robotic apparatus comprising:
   (a) a robot comprising a controller adapted to process a signal to an actuator;
   (b) a dynamic feedback control system between a user and said robot, said control system having a sensor in communication with said user to sense input of said user and to communicate a signal of said sensor with said robot; and
   (c) said actuator adapted to receive said signal and to actuate a part of said robot in response to said user input exceeding a defined threshold;
   (d) wherein said sensor is in wireless communication with said robot; and
   (e) said robot having a sensor, wherein said sensor is a biometric sensor whose input is selected from the group consisting of: position, velocity, acceleration, force, auditory, thermal, electrical, optical, and combinations thereof.

2. (Cancel) The apparatus of claim 1, further comprising said robot having a sensor.

3. The apparatus of claim 1, wherein said input of said user is physical.

4. The apparatus of claim 1, wherein said sensor is secured to said user.

5. The apparatus of claim 1, wherein said sensor is secured to a console.

6. (Cancel) The apparatus of claim 2, wherein said sensor is a biometric sensor whose input is selected from the group consisting of: position, velocity, acceleration, force, auditory, thermal, electrical, optical, and combinations thereof.

7. The apparatus of claim 1, wherein said robot part is selected from the group consisting of: an arm assembly, a leg assembly, a head assembly, facial components, any actuator in communication with the controller, and combinations thereof.

8. The apparatus of claim 1, further comprising a computer to store data received from said sensor.

9. The apparatus of claim 8, wherein said computer is mounted in a location selected from the group consisting of: internal to said robot, internal to said sensor, external to said robot, and combinations thereof.

10. The apparatus of claim 1, further comprising an operator interface to modify configuration of said robot.

11. The apparatus of claim 10, wherein said operator interface includes a menu to select an interactive mode of operation between said robot and said user.

12. The apparatus of claim 10, wherein said operator interface allows an operator to evaluate said user input.

13. The apparatus of claim 10, wherein said operator interface is accessible from a location

remote from said robot and said user.

14. The apparatus of claim 10, wherein said operator interface allows an operator to program an unique interactive mode of operation.

15. The apparatus of claim 1, wherein said robot is selected from the group consisting of: a physical apparatus, a virtual apparatus, and combinations thereof.

16. A method for controlling a robotic apparatus comprising:
(a) reading sensor data in communication with said apparatus;
(b) processing sensor data;
(c) transmitting said sensor data over a wireless connection from said sensor to a receiver in communication with said apparatus;
(d) parsing said sensor data;
(e) activating an actuator of said robot in response to said parsed data; ~~and~~
(f) interacting with said apparatus in a dynamic feedback control system,
(g) wherein the step of processing said sensor data includes functions selected from the group consisting of: analog to digital converting, compressing said data, mapping said data, thresholding said data, filtering said data, encrypting said data, pattern recognition, and combinations thereof.

17. The method of claim 16,further comprising the step of providing feedback from said apparatus to a user.

18. The method of claim 17, wherein said feedback is biometric feedback selected from the group consisting of: visual, tactile, auditory, and combinations thereof.

19. The method of claim 16, wherein the step of processing said sensor data includes processing physical input signals.

20. The method of claim 16, further comprising the step of directly transmitting said sensor data to said apparatus for controlling said actuator of said apparatus in real-time.

21. (Cancel) The method of claim 16, wherein the step of processing said sensor data includes functions selected from the group consisting of: analog to digital converting, compressing said data, mapping said data, thresholding said data, filtering said data, encrypting said data, pattern recognition, and combinations thereof.

22. The method of claim 16, wherein the step of parsing said sensor data includes functions selected from the group consisting of: analog to digital converting, de-encrypting said data, de-compressing said data, pattern recognition, mapping said data, filtering said data, thresholding said data, and combinations thereof.

23. The method of claim 16, further comprising the step of recording said sensor data.

24. The method of claim 23, further comprising the step of retrieving said recorded sensor

data and playing said data for activating select parts of said apparatus associated with said data.

25. The method of claim 23, wherein the step of recording said sensor data includes saving said data in a medium in communication with an apparatus selected from the group consisting of: said sensor, said apparatus, a remote console, and combinations thereof.

26. The method of claim 23, further comprising the step of accessing said sensor data from a remote location for evaluation of said data.

27. The method of claim 16, wherein the step of interacting with said apparatus in a dynamic feedback control system includes the step of providing interactive communication between said sensor and said apparatus.

28. The method of claim 16, further comprising the step of modifying configuration of said apparatus through an operator interface in wireless communication with said apparatus.

29. The method of claim 28, wherein the step of modifying configuration of said apparatus includes modifications selected from the group consisting of: mapping of said sensor data from said operator interface to said apparatus, modifying thresholds and gains, selecting a platform for interactive communication attributes of said apparatus, and combinations thereof.

30. The method of claim 16, further comprising the step of connecting said apparatus to a communication network.

31. The method of claim 16, further comprising the step of connecting a remote console to a communication network.

32. An article comprising:
a computer-readable signal-bearing medium;
means in the medium for sending data over a wireless connection;
means in the medium for communicating activation of a signal in a remote robotic apparatus;
means in the medium for remotely setting configuration parameters of a sensor and an actuator of said robotic apparatus; ~~and~~
means in the medium for providing dynamic interaction between said robotic apparatus and a user in communication with said robotic apparatus,
wherein said configuration parameters are selected from the group consisting of : mapping, calibration, thresholding and gains, and combinations thereof.

33. The article of claim 32, wherein the medium is selected from the group consisting of :a recordable data storage medium, a modulated carrier signal, and combinations thereof.

34. The article of claim 32, wherein said means for communicating activation of a signal is a communication protocol.

35. The article of claim 32, wherein said means for remotely setting configuration parameters is a graphical user interface.

36. (Cancel) The article of claim 32, wherein said configuration parameters are selected from the group consisting of : mapping, calibration, thresholding and gains, and combinations thereof.

37. The article of claim 32, further comprising conducting real-time assessment of signal data in said medium.

38. The article of claim 32, further comprising providing remote interaction between an operator to said robotic apparatus in real-time in said medium.

39. The article of claim 38, wherein said remote interaction includes retrieving a set of instructions to provide interactive communication between said robotic apparatus and said user.

40. The article of claim 32, further comprising saving said data in said medium.

41. The article of claim 32, further comprising transmitting said data to a computer remote from said robotic apparatus.

42. The article of claim 41, further comprising conducting assessment of said data.

43. A wireless signal communication system comprising:
(a) a sensor in remote communication with an actuator;
(b) a power control module;
(c) a transceiver;
(d) a central processing unit; and
(e) a dynamic control system between said sensor and said actuator adapted to enable control of said actuator in response to feedback communicated to said sensor,
(f) wherein said sensor is a biometric sensor whose input is selected from a group consisting of: position, velocity, acceleration, force, auditory, thermal, electric, optical, and combinations thereof..

44. The system of claim 43, wherein said transceiver and said central processing unit are adapted to receive and process sensor data and to transmit said data to said actuator.

45. The system of claim 43, further comprising a plurality of wireless sensors in communication with a single central processing unit.

46. The system of claim 45, wherein said plurality of sensors are physically connected.

47. The system of claim 43, further comprising a plurality of central processing units with each unit comprising a plurality of connected sensors.

48. The system of claim 43, wherein said actuator is selected from the group consisting of: virtual and physical, and combinations thereof.

49. The system of claim 43, wherein said transceiver and said central processing unit are connected to a communication network.

1. A robotic ~~apparatus~~ appliance comprising:
   (a) a robot comprising a controller adapted to process a signal to an actuator;
   (b) a dynamic feedback control system between a user and said robot, said control system having a sensor in communication with said user to sense input of said user and to communicate a signal of said sensor with said robot; and
   (c) said actuator adapted to receive said signal and to actuate a part of said robot in response to said user input exceeding a defined threshold;
   (d) wherein said sensor is in wireless communication with said robot.

2. The robotic appliance ~~apparatus~~ of claim 1, further comprising said robot having a sensor.

3. The robotic appliance ~~apparatus~~ of claim 1, wherein said input of said user is physical.

4. The robotic appliance ~~apparatus~~ of claim 1, wherein said sensor is secured to said user.

5. The robotic appliance ~~apparatus~~ of claim 1, wherein said sensor is secured to a console.

6. The robotic appliance ~~apparatus~~ of claim 2, wherein said sensor is a biometric sensor whose input is selected from the group consisting of: position, velocity, acceleration, force, auditory, thermal, electrical, optical, and combinations thereof.

7. The robotic appliance ~~apparatus~~ of claim 1, wherein said robot part is selected from the group consisting of: an arm assembly, a leg assembly, a head assembly, facial components, any actuator in communication with the controller, and combinations thereof.

8. The robotic appliance ~~apparatus~~ of claim 1, further comprising a computer to store data received from said sensor.

9. The robotic appliance ~~apparatus~~ of claim 8, wherein said computer is mounted in a location selected from the group consisting of: internal to said robot, internal to said sensor, external to said robot, and combinations thereof.

10. The robotic appliance ~~apparatus~~ of claim 1, further comprising an operator interface to modify configuration of said robot.

11. The robotic appliance ~~apparatus~~ of claim 10, wherein said operator interface includes a menu to select an interactive mode of operation between said robot and said user.

12. The robotic appliance ~~apparatus~~ of claim 10, wherein said operator interface allows an operator to evaluate said user input.

13. The robotic appliance ~~apparatus~~ of claim 10, wherein said operator interface is accessible from a location remote from said robot and said user.

14. The robotic appliance ~~apparatus~~ of claim 10, wherein said operator interface allows an operator to program an unique interactive mode of operation.

15. The robotic appliance ~~apparatus~~ of claim 1, wherein said robot is selected from the group consisting of: a physical apparatus, a virtual apparatus, and combinations thereof.

16. A method for controlling a robotic ~~apparatus~~ appliance comprising:
    (a) reading sensor data in communication with said apparatus;
    (b) processing sensor data;
    (c) transmitting said sensor data over a wireless connection from said sensor to a receiver in communication with said apparatus;
    (d) parsing said sensor data;
    (e) activating an actuator of said robot in response to said parsed data; and
    (f) interacting with said apparatus in a dynamic feedback control system.

17. The method of claim 16,further comprising the step of providing feedback from said apparatus to a user.

18. The method of claim 17, wherein said feedback is biometric feedback selected from the group consisting of: visual, tactile, auditory, and combinations thereof.

19. The method of claim 16, wherein the step of processing said sensor data includes processing physical input signals.

20. The method of claim 16, further comprising the step of directly transmitting said sensor data to said apparatus for controlling said actuator of said apparatus in real-time.

21. The method of claim 16, wherein the step of processing said sensor data includes functions selected from the group consisting of: analog to digital converting, compressing said data, mapping said data, thresholding said data, filtering said data, encrypting said data, pattern recognition, and combinations thereof.

22. The method of claim 16, wherein the step of parsing said sensor data includes functions selected from the group consisting of: analog to digital converting, de-encrypting said data, de-compressing said data, pattern recognition, mapping said data, filtering said data, thresholding said data, and combinations thereof.

23. The method of claim 16, further comprising the step of recording said sensor data.

24. The method of claim 23, further comprising the step of retrieving said recorded sensor data and playing said data for activating select parts of said apparatus associated with said data.

25. The method of claim 23, wherein the step of recording said sensor data includes saving said data in a medium in communication with an apparatus selected from the group consisting of: said sensor, said apparatus, a remote console, and combinations thereof.

26. The method of claim 23, further comprising the step of accessing said sensor data from a remote location for evaluation of said data.

27. The method of claim 16, wherein the step of interacting with said apparatus in a dynamic feedback control system includes the step of providing interactive communication between said sensor and said apparatus.

28. The method of claim 16, further comprising the step of modifying configuration of said apparatus through an operator interface in wireless communication with said apparatus.

29. The method of claim 28, wherein the step of modifying configuration of said apparatus includes modifications selected from the group consisting of: mapping of said sensor data from said operator interface to said apparatus, modifying thresholds and gains, selecting a platform for interactive communication attributes of said apparatus, and combinations thereof.

30. The method of claim 16, further comprising the step of connecting said apparatus to a communication network.

31. The method of claim 16, further comprising the step of connecting a remote console to a communication network.

32. An article comprising:
a computer-readable signal-bearing medium;
means in the medium for sending data over a wireless connection;
means in the medium for communicating activation of a signal in a remote robotic appliance ~~apparatus~~;
means in the medium for remotely setting configuration parameters of a sensor and an actuator of said robotic apparatus; and
means in the medium for providing dynamic interaction between said robotic apparatus and a user in communication with said robotic apparatus.

33. The article of claim 32, wherein the medium is selected from the group consisting of :a recordable data storage medium, a modulated carrier signal, and combinations thereof.

34. The article of claim 32, wherein said means for communicating activation of a signal is a communication protocol.

35. The article of claim 32, wherein said means for remotely setting configuration parameters is a graphical user interface.

36. The article of claim 32, wherein said configuration parameters are selected from the group consisting of : mapping, calibration, thresholding and gains, and combinations thereof.

37. The article of claim 32, further comprising conducting real-time assessment of signal data

in said medium.

38. The article of claim 32, further comprising providing remote interaction between an operator to said robotic apparatus in real-time in said medium.

39. The article of claim 38, wherein said remote interaction includes retrieving a set of instructions to provide interactive communication between said robotic apparatus and said user.

40. The article of claim 32, further comprising saving said data in said medium.

41. The article of claim 32, further comprising transmitting said data to a computer remote from said robotic apparatus.

42. The article of claim 41, further comprising conducting assessment of said data.

43. A wireless signal communication system comprising:
(a) a sensor in remote communication with an actuator;
(b) a power control module;
(c) a transceiver;
(d) a central processing unit; and
(e) a dynamic control system between said sensor and said actuator adapted to enable control of said actuator in response to feedback communicated to said sensor,
(f) wherein said sensor is a biometric sensor whose input is selected from a group consisting of: position, velocity, acceleration, force, auditory, thermal, electric, optical, and combinations thereof..

44. The system of claim 43, wherein said transceiver and said central processing unit are adapted to receive and process sensor data and to transmit said data to said actuator.

45. The system of claim 43, further comprising a plurality of wireless sensors in communication with a single central processing unit.

46. The system of claim 45, wherein said plurality of sensors are physically connected.

47. The system of claim 43, further comprising a plurality of central processing units with each unit comprising a plurality of connected sensors.

48. The system of claim 43, wherein said actuator is selected from the group consisting of: virtual and physical, and combinations thereof.

49. The system of claim 43, wherein said transceiver and said central processing unit are connected to a communication network.